AD/TD Joint Projects Meeting
Wednesday, 7 January 2004, 10:30 AM
TD/Hermitage Conference Room

Present: Jerry Annala, Paul Czarapata, Hank Glass, Keith Gollwitzer, Dave Harding (scribe), Elvin Harms, Jim Kerby, Gregg Kobliska, Dave McGinnis, Jeff Spalding, Rich Stanek

AGENDA

Reports of notable achievements, problems, and issues
- Almost all tunnel lift data gathered (a little of E sector remains)
- Some Torlon painting done
- Debuncher injection septum magnet vacuum leak
- Dead Tevatron correctors
- Proposed test of HTS leads

Task Numbers

We seem to have a proper alignment of TD and AD numbers. A couple of new AD M&S numbers are still needed. It would be useful for someone to verify that the M&S numbers listed on our job list have been copied correctly.

Continued refinement of project list
- Need priorities, appropriate reporting categories
- Do we have convergence?
- Expected review and decision dates for:
  - AP2/Debuncher aperture work
  - Tev RF
  - Tev reference magnet system
  - FMI large aperture quad
- Shutdown '04

Notable Achievements or Problems

TD took advantage of the recent unscheduled shutdowns to gather more cold lift data in the tunnel. All but a small section of E sector is complete now.

TD also painted more of the Torlon insulators on upgraded spools. Only a few remain to do.

TD has added to its work list the repair of the Debuncher injection septum that developed a vacuum leak in late December. The lead time to procure a key part, the flange assembly with the ceramic insulators, is 14 weeks. TD is looking at an alternate design for the feedthroughs that would be more robust than the ceramic-copper seal that failed and that might be faster to implement as well. Building new septum magnets to reduce the septum thickness (job 222) is on the job list for this year in order to not take the spare out of service. Since it is out of service now, it might be appropriate to modify this magnet. A meeting is planned right after this meeting between P-Bar and TD to discuss the feasibility and dangers of this.

TD has noted the failed (open circuit) correctors in an H spool in the Tevatron in December. Even though the machine runs without the correctors, the Tevatron Department would like to replace the spool when it is convenient, at the next major shutdown at the latest. The failed spool is a standard H spool (TSH). Currently there is one TSH spare and three TSHH spares (with high temperature superconducting leads). Since it would only take a couple of days to finish the nitrogen plumbing needed for a TSHH spool, the plan would be to install one of them at this location to keep the spares pool balanced. TD and Tevatron agree on this plan. The desirability of increasing the spares count by one (to replace the failed one) is noted. There is one suitable spare coil package in case none of the spools waiting for repair has good coils.

The B-Tev/C0-IR project has requested permission to test one of the TSHH spools up to 10,000 A. They would like to use HTS leads on the new quads for the IR, but no vendor is interested in developing new leads. Our vendor for the leads in the THSS spools is willing to make more of the same. These leads never failed in testing up to about 7.5 kA, so it is not a stretch to think that they may well run happily at 10,000. It was thought that Vladimir Shiltsev had approved this, but Jerry will check.

Since the agenda was distributed, two new requests have come in:

Bruce Hanna is exploring with Dave Harding the feasibility of providing a bakeable beam tube through the dogleg at E0, currently composed of B2 dipoles. This is only in the information gathering stage, but Bruce may make a case for TD assistance on this.

The spares pool of chokes from Main Ring power supplies have water leaks is exhausted. Two have failed with water leaks. This will be high priority as a repair job.

WBS and task numbers for effort reporting and M&S

We seem to have a proper alignment of TD and AD numbers. A couple of new AD M&S numbers are still needed. It would be useful for someone to verify that the M&S numbers listed on the TD job list have been copied correctly. A request is in to Harlan for two new task numbers, one for the spare Booster extraction C magnet and the other for a WIP code for the new LEP corrector coils.

Reviews and Decisions

AP2/Debuncher:

> All that remains before TD can start work on the D4Q4 replacement is a drawing of the relative magnet locations so that the interferences can be removed and a determination that the optics do indeed work. The end of January was set as the target for that decision.
>
> The Debuncher injection septum work will proceed, possibly accelerated by the opportunity to modify an existing magnet (as noted earlier in the meeting).
>
> In the last few days P-Bar as recognized that a new Debuncher extraction kicker magnet may not be necessary; it may be sufficient to build a new vacuum tube for the existing magnet. This would obviate the need for a new magnet and possible new power supply, making a 2004 date much more feasible. This is a new idea

that needs more study and verification. The end of January was set as target for that decision as well.

Tev RF: TD will do nothing until receiving further instruction.

Tev reference magnet system: The review recommended that this not proceed as a project. MTF will be making some improvements its measurement system to better support the various studies, but there will no direct tie to the Tevatron operation. This job will be removed from the list.

FMI large aperture quad: Still waiting for a Main Injector review of the conceptual design in the second Proton Driver design report (chapter 17).

TEL work should come off the list.

Shutdown 2004

Dave H. reminded everyone that time is running out to choose projects for the 2004 shutdown if they involve new designs and construction. TD is working on an effort assessment based on its understanding of priorities. Things known to be wanted for the shutdown: more separators, separator polarity switches, debuncher injection septum, D4Q4 replacement, Debuncher extraction kicker aperture increase. By the next meeting there should be an indication of whether everything can be done or whether choices must be made.

TD will update reports in the next week, or so. AD departments will respond for the next meeting

Next Meeting: Wednesday, 28 January 2004, 10:30 AM
Hermitage Conference Room (Industrial Center Building, 2nd Floor, East)